GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

Contents for Week of February 11, 1929. Vol. VII. No. 29

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© *Photograph from Joseph Beech*

MANY CHINESE ROADS ARE PASSABLE ONLY FOR WHEELBARROWS

(See Bulletin No. 5).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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Malaga, Terminus of a New Highway Spanning Spain

MALAGA is one terminus of a north-to-south motor highway to be built across Spain.

The highway will be 625 miles long and will put the southern port in direct contact by road with Madrid. Its estimated cost is $40,000,000.

Malaga, where the famous grapes are packed in neat little casks of ground cork and shipped to luxury-loving cities of the world, is the second port of Spain and enjoys a mild climate. A sizable English winter colony has collected there to enjoy the warm dry air and Mediterranean scenery. With mountainous hinterland and bay of brilliant blue, Malaga has been called a Spanish Naples.

Malaga Ships Many Delicacies for the Table

This thriving port of about 150,000 people is a gourmet's paradise. From here the first spring vegetables are shipped to Paris, beans and tomatoes in December and strawberries in February. Fishermen of Malaga supply a large part of the Madrid market with sole, whiting, mackerel, sardines and anchovies. The name Malaga is said to be derived from the Phoenician *malac*, to salt, referring to the trade in salt fish among the ancients for which this city was noted.

Ships at Malaga's quays are being constantly loaded with delicacies for all parts of the world: almonds, muscatel raisins as big as quarter dollars for the "special" trade, figs, pomegranates, melons, and sweet potatoes. There is also a thriving business in olive oil, muscatel wine, and extracts of thyme, lavender, and rosemary for perfume manufacture.

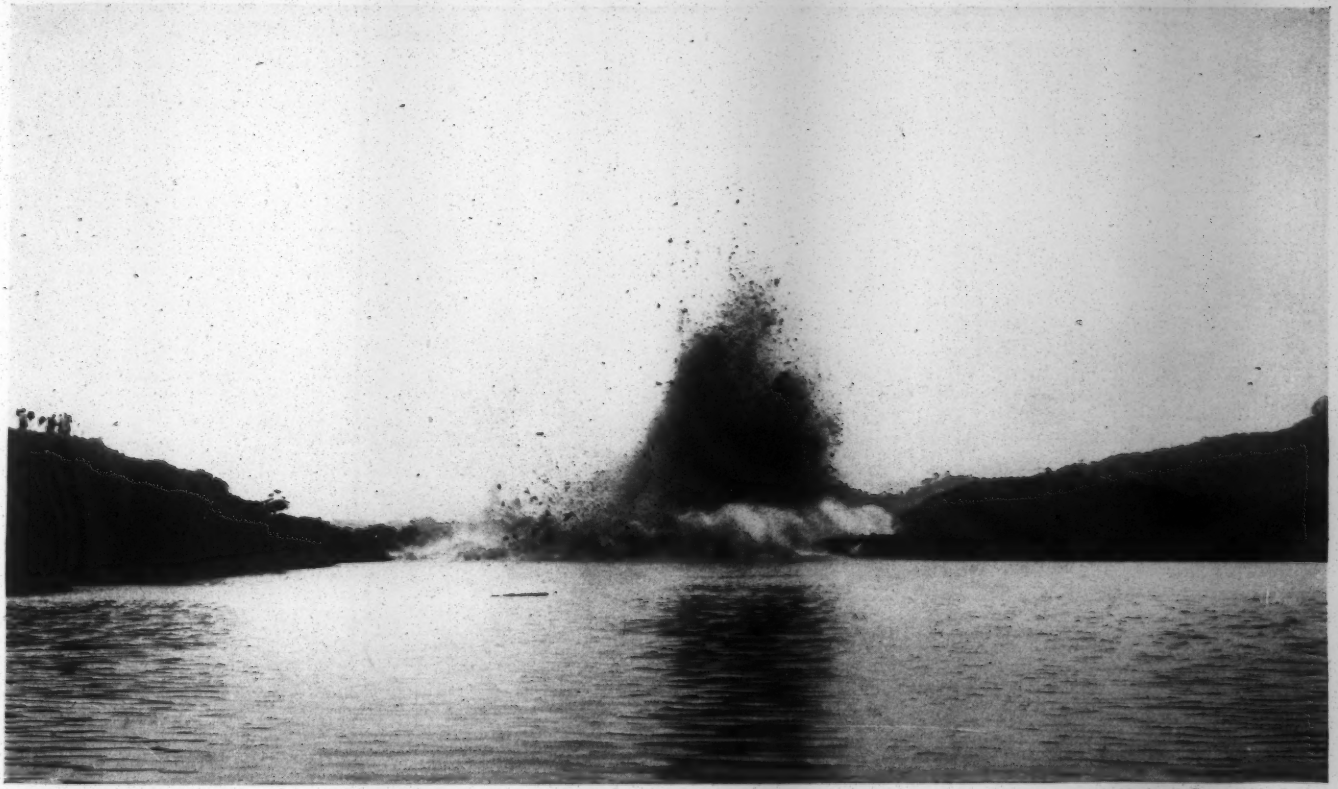
Malaga was a bustling trading place in the days of the Phoenicians. Later it became a Roman city, and after the downfall of the Roman Empire was one of the centers of Visigoth rule. Captured by the Arabs in 711, it remained the chief port of the kingdom of Granada until Ferdinand and Isabella drove the Moors from Spain in the days of Columbus.

Eyes "to See Fish" Painted on Boats

The city is famous in Spain for the beauty of its women, who are for the most part small and dark of complexion, showing at times traces of Moorish ancestry. On Sundays the bullfight arena is crowded and one may see the port's youth and beauty on parade. Malaga has been the seat of a bishop since 865, but the cathedral is not yet completed.

Nowadays a little of the romance of the ancient city is being worn off by the presence of thriving cotton mills and sugar refineries of the new Spain. However, out on the brilliant blue waters of the bay, past the crowded shipping near the docks, still sail fishing boats of many colors, each with a pair of painted eyes to look out for schools of fish. Thus mingle the old and new.

Bulletin No. 1, February 11, 1929.



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BLOWING UP THE GAMBOA DIKE, PANAMA CANAL ZONE

The last land barrier between the two oceans was broken down on October 10, 1923, by the explosion of a charge of dynamite stored in the Gamboa Dike. The charge was fired by the depression of a telegraph key at the White House by the late President Wilson (See Bulletin No. 4).

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Florida Harvests the Sea

THE President-elect will find ample sport for a hook and line in Florida waters.

With tarpon, sailfish, amber jack and many other "big fellows" to angle for, fishermen know the Gulf Stream as a piscatorial paradise.

Food fish as well as game fish inhabit Florida waters, but this important fact often is forgotten in stirring tales of the 6-foot beauty that got away.

Forty years ago Florida marketed less than a million dollars' worth of sea products. To-day she occupies a commanding position among southern States' fisheries, shipping to a broadening market catches valued at $5,750,000 in a single year.

Key West Is the Key Market of Florida Fisheries

The key to Florida's fisheries can be found at the Key West wharf market. A householder can buy a string of twenty different edible fish at Key West.

Until artificial ice manufacture began it was necessary to go south to feast on the many denizens of the warm seas. Now a person with an active imagination can give his order in a New York restaurant, and, in vision, sail out on the blue ocean under a warm sun, throw a line, feel the jerk of the bite, hear the buzz of the reel . . . And lo, the waiter serves the very fish that was on the envisioned line, a Spanish mackerel, a delicious meal for the "catcher" and consumer who has not ventured a mile from Manhattan.

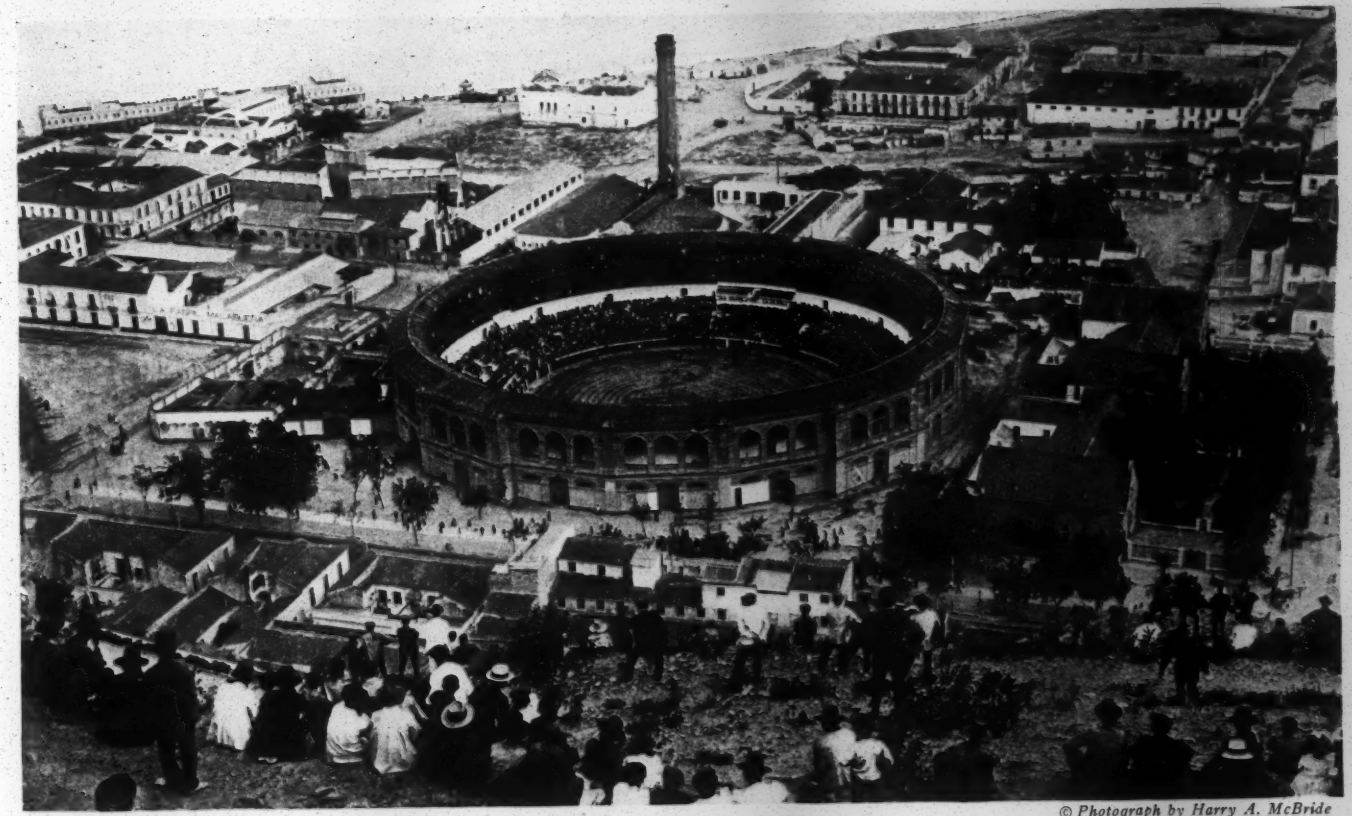
Various ports of Florida specialize: Pensacola for red snapper and grouper; Key West and West Palm Beach for kingfish and Spanish mackerel; Key West alone for spiny lobster and sea turtle; Fernandina for shrimp; Tarpon Springs for sponges; Apalachicola for oysters; Marco for clams, and Okeechobee for catfish. Other important fishing centers are Bradentown, Miami, Punta Gorda and Tampa.

Florida Also Ships Millions of Pounds of Fresh-Water Fish

But Jacksonville has assumed the mantle of Boston in Florida. Rail connections west, northwest, and north enable Jacksonville to gather into its municipal arms ten million pounds of Florida sea products annually and ship them out in some six hundred carloads.

The warm Gulf Stream waters are like the pages of Dickens in the variety and curious qualities of their inhabitants when compared with northern waters. Even the names of fishes suggest Dickens: Porgy is a resident of the reefs; Mullet is much sought after by net fishermen; Grunt is good eating despite his noisy habits; the Groupers comprise a large, middle class family; the Sergeant Major proudly wears six black chevrons; Cowfish looks not unlike Mr. Podsnap, and Swellfish can be as round as Mr. Pickwick.

Probably the most astonishing fish that Florida sells is the catfish. Although salt water surrounds the State, fresh-water catfish has won a commercial reputation. Seven million pounds of catfish have been taken out of Lake Okeechobee in one year. Nearly all the catch goes to St. Louis, for no matter what other cities prefer, St. Louis likes its catfish.



© Photograph by Harry A. McBride

A BIRD'S-EYE VIEW OF A BULLFIGHT

Every Sunday afternoon from early spring till late autumn the Gibralfaro hill at Malaga is crowded by "fans" who do not have the price of admission to the ring. Neverthless, they get a good, though rather long-distance view of the fight.

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Monaco Buzzes With a Government Crisis

A CONSTITUTION, equal suffrage, and modern government have been proposed by a group of Monegasques as a solution of difficulties their country faces.

Monegasques are natives of Monaco, the smallest nation of Europe. It is the home of the famous Monte Carlo Casino. Against the dictatorship of the Casino management the Monegasques have protested to their ruler, Prince Louis.

The average taxpayer of the United States is interested when he learns that Monte Carlo citizens are exempt from taxes. He is likely to be amused when he learns that, as a sort of price for this freedom, they are solemnly prohibited from gaming at the Casino or elsewhere. He will be astounded when he acquires a third fact: no taxes are collected from the non-gaming Monegasques because the country's and the city's expenses are paid from the profits of the Casino.

Hotels, Villas, Theaters Built near Casino

The city of Monte Carlo is a direct creation of the magnificent Casino which dominates its shore line. Seventy-five years ago Monaco town existed on its rock to the south much as it had existed for seven centuries; and at its foot was a part of the present commune of La Condamine. But to the north, the site of Monte Carlo was only a picturesque brown plateau and hillside, scarred with rough outcropping rock ledges, with here and there an isolated house. In 1856 the reigning Prince of Monaco permitted the establishment of a small gaming Casino on the Rock of Monaco. Soon it was moved to the bare plateau to the north.

The unpretentious casino grew and around it rose hotels and other buildings. By 1878 the first unit of the present elaborate and magnificent gaming Casino was erected. Greater and more handsome hotels, theaters, and art museums arose, and villa after villa appeared on the hillsides.

The recorder of facts who writes of the Monte Carlo of to-day must hold himself in leash lest his facts appear like extravagant fancies. Monte Carlo probably could not be said truthfully to be either the most beautiful or the cleanest little city in the world or to have the world's finest seashore setting. But when all three of these factors are considered at once it is doubtful whether any other town of its size can vie with this sparkling City of Chance. As one views it from shipboard or from the railroad platform on one of the lower shelves that rim the sea, it rises in tier above tier of glittering, sun-bathed, white marble—terrace balustrades, steps, palaces, hotels, and villas—against a background of brown hills. Above is the bluest of southern skies and below the bluest of Mediterranean bays. Palms and other tropical and semi-tropical trees wave from parks and gardens. It is as if the dream city of some great mural artist had been taken from the wall where his genius had created it and set up in stone. As one wanders along Monte Carlo streets the illusion is not shattered. There is no drabness; all is cleanliness and well-ordered beauty.

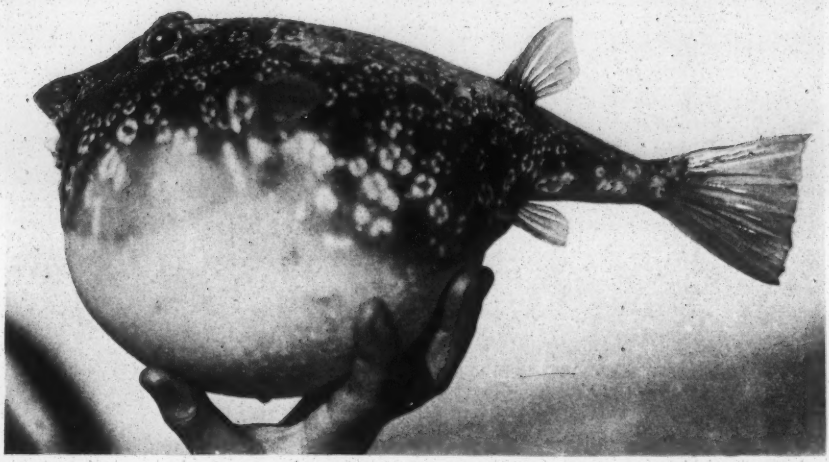
Monte Carlo's beauty rises to its peak around the Casino, its delightful flower-filled gardens, and its wonderful, broad, stone-balustraded terraces that hang above the sea. As one wanders along the terraces, following their little bays and outward folds, a series of superb views appears. To the south rises the sheer Rock of Monaco, crowned by palace, museums, and cathedral; at its foot

They Go to Work on the Bottom of the Sea

Anyone who is willing to work 60 feet under the surface for two hours at a stretch is eligible for a position in another of Florida's unusual fisheries. After he has been down two hours, a sponge gatherer at Tarpon Springs on the west coast gets a well-earned rest before descending for another two hours. Of course the divers, most of whom are Greeks, wear diving suits and receive air constantly while they wander over the bottom reaching into crevices, picking sponges here and there, and placing them in a basket.

Greeks gather sponges in the Mediterranean, so many of them drift to Florida fisheries upon arrival in America. The colony has grown so much that it supports a prosperous Greek Orthodox Church. Key West, the former sponge city, has been eclipsed by Tarpon Springs.

Bulletin No. 2, February 11, 1929.



© *Photograph by L. F. Williams*

SWELL (PUFFER) FISH FOUND IN FLORIDA WATERS AND ALL WARM SEAS

To frighten its enemies, this fish is permitted by a considerate Nature to fill itself with air when approached. Sometimes it puffs too much and bursts.

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This Explosive Age

BOOMING detonations that a century ago could have meant only the thunders of war, are heard almost every day now by the inhabitants of any sizable city.

They are the sounds of man's most powerful slaves, explosives, carrying on their daily labors; tearing loose materials for lime and cement, digging out stone for structures and roads, piercing hills, excavating in order that dams, railways, and factories may grow. The pioneer slowly and laboriously slashed his way through Nature's superficial barriers with his ax; with much less effort the modern engineer blasts his way through mountains, tumbles hills into valleys, and recasts the face of the earth to his liking and his need.

Civilization has had its ages of stone and bronze and steel; of wind and water and steam power. It requires taking no great liberties with terms to call this an age of explosives. Man blasts out the route for a highway, makes it smooth with stone and cement blown out elsewhere, so that it may be traversed by millions of vehicles propelled by explosions of gases. Overhead airplanes whir, driven by explosive engines. Man has conquered the air only since the harnessing of explosions for power, and has never made a practical flying machine driven by any other form of energy. By the roadside farmers plow their fields with tractors driven by similar engines, and blast boulders and stumps from their fields with charges of high explosives.

With Explosives Man Can Overcome Gravity and Produce Earthquakes

In cities, our water supplies come through aqueducts and tunnels that explosives have helped build. Diesel engines driven by exploding petroleum are replacing steam engines in factories and ships; and some light and power plants are operated by these highly concentrated and economical mechanisms. Even steam plants and railways are dependent on explosives, for the coal which drives them is torn by powder and dynamite from the bowels of the earth.

Never since man developed his first crude tools—wooden clubs, stone hammers, and the rest—has he come upon a device or a substance comparable in force to explosives. They give him the powers of a demi-god. With them he can come closer to imitating Nature's forces than in any other way. He can overcome the force of gravity so as to hurl projectiles scores of miles. He can even shake the earth itself so that his "earthquake" waves can be detected by seismographs hundreds of miles away. When Hell Gate Rock was blown up at New York in 1835 the tremors were recorded at Albany and at Boston.

Explosives depend for their great power on the fact that, while occupying a relatively small space an instant before explosion, their gases occupy a tremendously greater space the instant after. Gunpowder, the first and the "tamest" of the well-known explosives, exerts, when it explodes in a confined space, 6,000 times the pressure of the atmosphere or nearly 50 *tons* per square inch. The "high explosives," dynamite, gun-cotton, nitro-glycerine, and TNT, exert several times the force of powder; and mercury fulminate, the most violent of all, produces a pressure of 200 *tons* per square inch. The latter finds its chief use in very small quantities in the form of caps used to detonate less violent explosives.

All explosives are dangerous and must be handled with caution; but there

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a tiny yacht harbor. To the southwest lies La Condamine, a supplemental little city of hotels. West and north Monte Carlo climbs the rugged hills. Eastward lies the sea; and to the northeast across the Bay of Hercules, a series of rugged promontories, darkened with pines and flecked with snow white villas, slope down into the blue waters, each peninsula a bit dimmer than its nearer neighbor. Among these points of land is Cap Martin, villa site for kings and emperors. Stroll along Monte Carlo's terraces at sunset among the enthralled visitors and you will learn the equivalent of "wonderful" in half the languages of Europe.

Area of Monaco About Eight Miles Square

Monaco is in area Europe's tiniest national unit, embracing only a trifle more than 8 square miles. It is a narrow strip of land along the sea entirely surrounded on three sides by French territory. At one place the principality is only 100 yards wide and one could throw a stone from the seashore into French territory. In greatest width the strip is three-quarters of a mile across. Most of the territory is covered by the towns of Monaco, La Condamine and Monte Carlo. The latter town, in fact, has outgrown its available Monegasque terrain and spills over into France. The boundary is not apparent. One side of the Boulevard de France in the northern section of the town is in Monaco and the opposite side in France. This French section is known as Beausoleil.

In return for permission to maintain the Casino on the soil of Monaco, the syndicate operating the establishment pays the Monegasque Government $450,000 a year. From this the expenses of operating the government are paid.

Bulletin No. 3, February 11, 1929.

NOTE TO TEACHERS

THE ISSUE of the GEOGRAPHIC NEWS BULLETINS for February 18 will contain a complete index of Volume VII of The Bulletins; an index by subjects treated and places mentioned.

Teachers who have the thirty issues of the Bulletin preceding that date will find this Index a key to their permanent use for reference and filing. Teachers who contemplate using the Bulletins will wish to have the subsequent 30 issues, that is, Volume VIII, complete by starting with the issue of February 25.

The GEOGRAPHIC NEWS BULLETINS are a gift of The National Geographic Society to education; a gift representing the expenditure of many thousands of dollars annually from The Society's education funds. The teacher pays only 25 cents annually, which represents the cost of handling and mailing the Bulletins.

Since these Bulletins constitute a gift they are not advertised and it is desired to restrict their mailing to teachers who actually use them. However, The Society desires to extend this phase of its school service to all teachers who require it. Therefore if you know of any teachers who would wish to use the Bulletins to supplement texts, to enliven their classroom teaching, and to keep abreast of the rapid changes in geography—changes which involve shifts of boundaries, capitals, names, customs, and other geographic data—it will be appreciated by them if you inform them of the availability of The Bulletins.

The attached blank is provided for your convenience, and theirs:

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Americans Honored for Road Building in China

TWO Chinese villages recently honored an American Marine officer in appreciation of the U. S. Marines' aid in helping solve Chinese road problems.

Last year the Marines moved north from Shanghai to Tientsin. It was soon observed that an important bridge on the road to Peking was in bad condition so the Marines rebuilt the bridge and its approaches. The Chinese were much impressed with the marvels of American road-building machinery used at the bridge. An agreement was made by which the Chinese authorities borrowed the machinery and 4,000 Chinese soldiers were put to work building a fine new highway to Peking. If completed, it will be one of the few good roads of any length in all China.

Good Roads Exist Only Near Large Cities

Good roads, which the American motorist searches out in the springtime, are not found in China outside a few port cities largely dominated by foreign influence. For the most part, communication in country districts is by mule-path or coolie-back between fields. Where roads exist they are apt to be rocky, and turn to sloughs of mud during the rainy season.

Communities such as Shanghai or Peking are exceptions. From Peking beautiful motor roads extend for miles into the Western Hills. This rugged range offers some magnificent scenery. On its heights are numerous Buddhist temples and monasteries, many of them used by members of the diplomatic corps as summer residences.

In normal times one can drive out from Shanghai along perfect boulevards lined with estates which remind one of England. However, not many such stretches of motor roads are come upon in the Flowery Kingdom.

Wheelbarrow a Common Carrier of China

In some large provinces, such as Szechwan, almost the entire land traffic is carried on the backs of men. In north China the Peking cart flourishes. This is a springless two-wheeled cart with enormously heavy wheels and usually a blue denim prairie-schooner top. In the privacy of the latter travelers are left in dismal solitude to "enjoy" heat, jolts and either dust or mud, according to season.

In Shantung Province inland traffic, both passenger and freight, is apt to be by wheelbarrow over paths along which similar barrows have squeaked since the day of Confucius. From Peking to Urga in Mongolia, across the Gobi Desert, stretches an ancient caravan route along which numberless camel trains carry Chinese tea to be exchanged for the furs of the north.

Whether the conveyance be mule cart, coolie pack, wheelbarrow, or camel, in China it is pretty sure to move along a bad road, it being nobody's business to keep the country's highways in repair.

Bulletin No. 5, February 11, 1929.

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are definite degrees of danger. Gunpowder and dynamite will not explode unless subjected to a more or less violent jolt. Nitro-glycerine and TNT are detonated much more easily. The most sensitive of all explosives is nitrogen-iodide. This substance is so unstable that it is said that the tap of a feather will set it off.

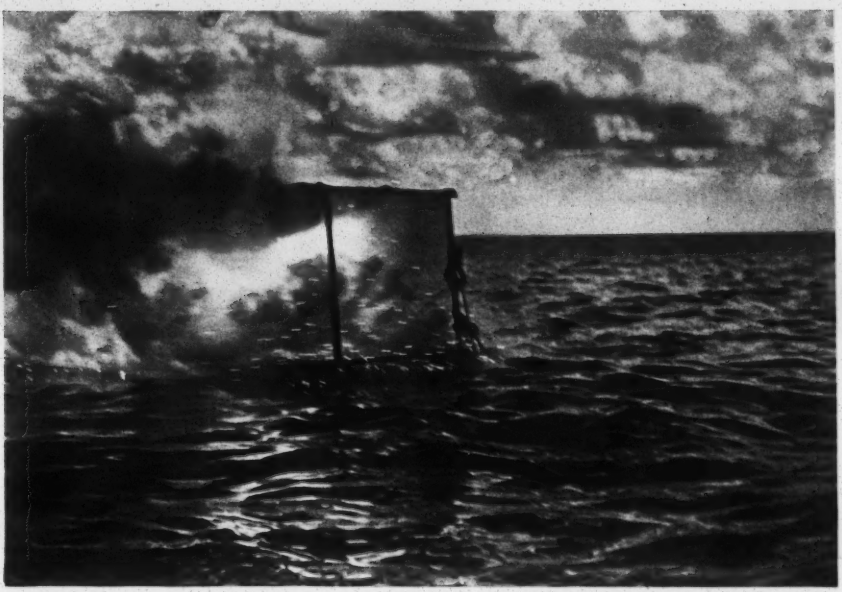
Even in peace time the United States manufactures large quantities of explosives. In one recent year the total, not considering explosives for ammunition, was more than half a billion pounds. Of this, approximately two-thirds was made up of high explosives and one-third of black powder. A quarter of the high explosives and 86 per cent of the black powder were used in coal mining. Nearly half of all the high explosives was used in metal mining and quarrying, and the remaining quarter was divided about equally between construction work and miscellaneous uses.

Near One Billion Horsepower in Explosive Engines in the United States

Man's discovery of explosives is not definitely known. Pyrotechnic substances such as Greek Fire or "wild fire" were used in the early and middle centuries of the Christian Era to frighten enemies or to set fire to their ships. But one of the first definite recipes for gunpowder appears in the writings of Roger Bacon in the thirteenth century. The first recorded use to propel missiles from cannons was in Florence in 1326.

Perhaps the most interesting chapter in the history of explosives was written one hundred years later in Southern Tyrol, now a part of northern Italy. In the first quarter of the fifteenth century Sigismund, Archduke of Tyrol, conceived the idea of using gunpowder to blast a better road through the gorge of the Eisak (now the Isarco). This, the first known use of an explosive for a constructive purpose, was a shot that has had mighty reverberations around the world.

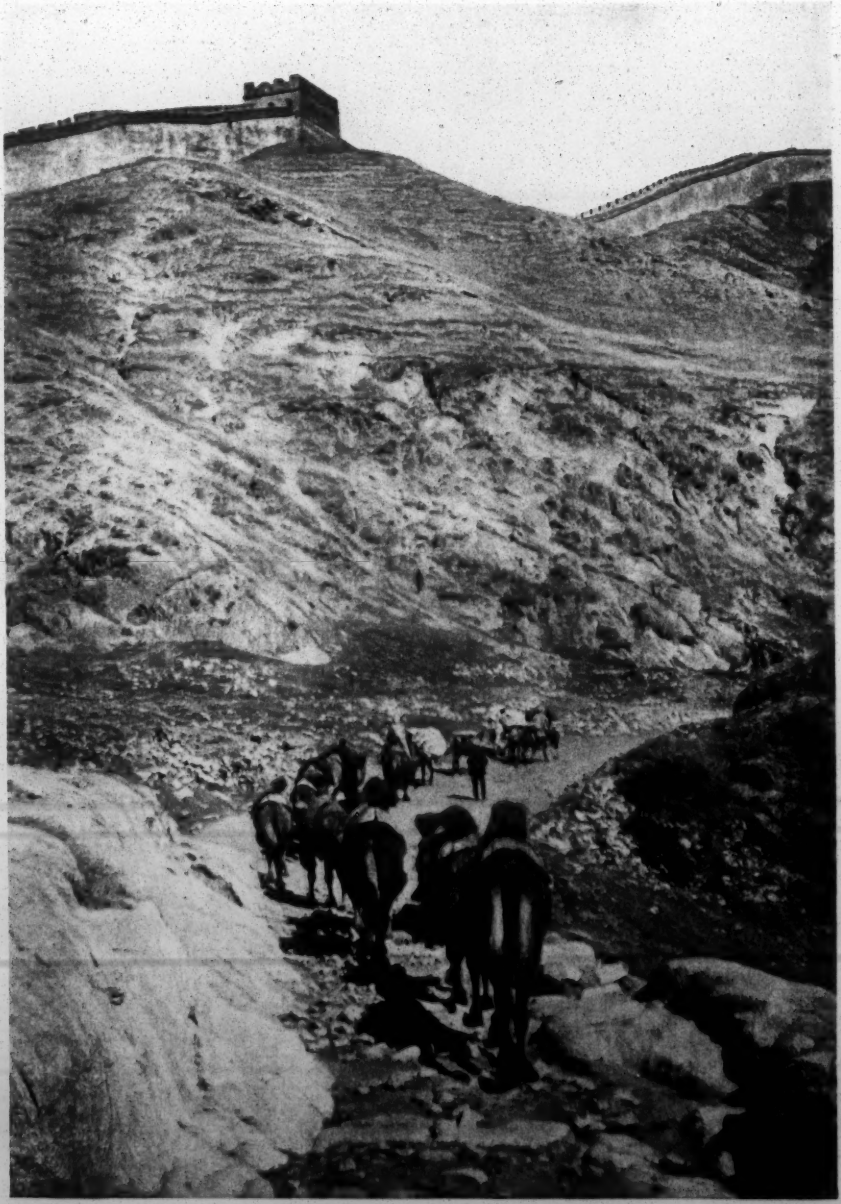
Bulletin No. 4, February 11, 1929.



© *Photograph by Charles Martin*

AN EXPLOSION THAT TOOK A PICTURE UNDER WATER

The photographer cannot be seen because he is under water using a special camera. The explosion of one pound of flashlight powder enabled him to take for the National Geographic Magazine the first color pictures of fishes in the ocean.



© Photograph by John D. Zumbrun

MONGOLIAN CARAVAN ROUTE THROUGH NANKOW PASS

Chinese roads are usually too rough or too full of mudholes for automobile travel. The Chinese custom in certain regions of using a two-wheeled cart with metal spikes on the wheels has cut the roads deep into the soil. In some places the carts travel along in defiles so deep that the traveler cannot see above the earth walls on either side.